

TDMS No. 95011 - 07

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]**

5-(HYDROXYMETHYL)-2-FURFURAL

CAS Number: 67-47-0

Pathologist: TOFT, J. - Unknown, U.

F1_R2

Date Report Reqsted: 09/01/2006

Time Report Reqsted: 08:20:21

First Dose M/F: 03/06/02 / 03/07/02

Lab: BAT

C Number: C95011B

Lock Date: 11/09/2004

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Dosing Accident			1	1
Moribund Sacrifice	20	9	9	10
Natural Death	8	7	9	4
Survivors				
Terminal Sacrifice	22	34	31	35
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Periesophageal Tissue, Hemorrhage			1 [3.0]	
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Large, Colon	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [3.0]			
Parasite Metazoan	3	5	3	7
Epithelium, Ulcer	1 [4.0]			
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	4	7	4	7
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Parasite Metazoan	1			
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Peyer's Patch, Hyperplasia, Lymphoid	1 [4.0]			
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [2.0]	1 [1.0]		2 [1.0]
Basophilic Focus	25	32	27	34
Clear Cell Focus	4	6	11	20
Degeneration, Cystic			1 [2.0]	
Eosinophilic Focus	1		2	2
Fibrosis	1 [2.0]			1 [1.0]
Hematopoietic Cell Proliferation	5 [1.6]	5 [1.0]	3 [1.7]	7 [1.1]
Hemorrhage	1 [3.0]			1 [3.0]
Hepatodiaphragmatic Nodule	4	6	6	3
Inflammation, Chronic Active	25 [1.4]	34 [1.3]	30 [1.2]	38 [1.2]

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Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Mixed Cell Focus	16	17	16	17
Bile Duct, Hyperplasia	49 [2.0]	47 [2.0]	47 [2.1]	48 [2.0]
Centrilobular, Hepatocyte, Degeneration	2 [3.0]	1 [4.0]	5 [3.6]	3 [3.3]
Hepatocyte, Degeneration, Cystic	8 [1.8]	17 [1.5]	15 [2.1]	10 [1.8]
Hepatocyte, Fatty Change	14 [2.0]	7 [2.1]	7 [1.9]	2 [3.0]
Hepatocyte, Hyperplasia		1 [4.0]	1 [3.0]	
Hepatocyte, Necrosis		4 [2.5]	2 [2.0]	
Hepatocyte, Vacuolization Cytoplasmic	18 [1.6]	24 [1.7]	16 [1.4]	24 [1.4]
Mesentery	(9)	(8)	(7)	(6)
Fat, Fibrosis	5 [2.4]	6 [2.7]	4 [2.8]	3 [2.0]
Fat, Hemorrhage		1 [2.0]		
Fat, Inflammation, Chronic Active	5 [3.4]	5 [2.8]	2 [2.0]	2 [2.0]
Fat, Mineralization	2 [1.5]	1 [2.0]	2 [2.0]	1 [1.0]
Fat, Necrosis	6 [4.0]	6 [3.8]	4 [4.0]	4 [4.0]
Fat, Pigmentation		2 [1.5]		1 [1.0]
Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus		1		
Cyst	1 [3.0]			
Inflammation, Chronic Active	1 [1.0]			
Pigmentation	1 [1.0]			
Acinus, Atrophy	23 [2.1]	21 [1.5]	25 [2.0]	23 [1.5]
Acinus, Hyperplasia		1 [4.0]	3 [3.3]	1 [3.0]
Duct, Cyst			1 [4.0]	
Salivary Glands	(50)	(50)	(49)	(49)
Atrophy, Focal				1 [4.0]
Inflammation, Chronic Active			1 [2.0]	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	4 [2.5]		1 [2.0]	
Epithelium, Hyperplasia	2 [2.5]	1 [2.0]		
Epithelium, Ulcer	3 [4.0]		1 [4.0]	
Stomach, Glandular	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 [2.0]			1 [1.0]
Epithelium, Erosion	1 [2.0]	2 [2.0]	2 [3.0]	
Epithelium, Hyperplasia				1 [2.0]
Tongue	(0)	(1)	(0)	(0)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Cardiomyopathy	48 [2.1]	49 [2.1]	49 [2.2]	48 [2.0]
Mineralization			1 [2.0]	1 [3.0]
Pigmentation		1 [1.0]		
Atrium, Fibrosis				2 [2.5]
Atrium, Thrombosis	5 [3.4]	4 [3.8]	3 [3.7]	2 [3.0]
Valve, Thrombosis				1 [4.0]
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule			1 [3.0]	1 [4.0]
Degeneration, Fatty			1 [2.0]	
Hematopoietic Cell Proliferation	9 [1.0]	6 [1.0]	2 [1.0]	9 [1.0]
Hyperplasia	20 [1.4]	7 [2.1]	11 [1.4]	18 [1.4]
Hypertrophy	1 [2.0]	2 [1.5]	4 [1.8]	2 [2.0]
Necrosis		1 [3.0]	1 [4.0]	
Vacuolization Cytoplasmic	36 [1.5]	25 [1.5]	25 [1.3]	28 [1.3]
Capsule, Inflammation, Chronic Active			1 [2.0]	
Adrenal Medulla	(50)	(50)	(50)	(50)
Angiectasis				1 [3.0]
Fibrosis	2 [3.0]			
Hemorrhage		1 [4.0]		
Hyperplasia	19 [1.9]	26 [1.8]	17 [2.1]	13 [1.7]
Pigmentation	1 [2.0]			
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]		2 [2.0]	
Parathyroid Gland	(49)	(48)	(48)	(48)
Pituitary Gland	(50)	(50)	(50)	(50)
Pars Distalis, Angiectasis	15 [2.7]	16 [2.6]	19 [2.8]	14 [3.0]
Pars Distalis, Cyst	8 [1.6]	3 [2.7]	3 [2.7]	4 [2.0]
Pars Distalis, Cyst, Multiple	1 [2.0]	1 [4.0]	2 [3.0]	1 [1.0]
Pars Distalis, Hyperplasia	20 [2.2]	20 [2.2]	18 [2.2]	23 [2.1]
Pars Distalis, Pigmentation	14 [1.4]	18 [1.4]	14 [1.5]	11 [1.5]
Pars Intermedia, Angiectasis		1 [3.0]		
Pars Intermedia, Cyst			1 [2.0]	
Pars Intermedia, Pigmentation	3 [2.0]	2 [1.0]		
Thyroid Gland	(50)	(49)	(48)	(48)
Pigmentation	1 [2.0]			
Ultimobranchial Cyst	2 [2.0]		1 [2.0]	1 [2.0]

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FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Bilateral, C-cell, Hyperplasia		1 [2.0]		
C-cell, Hyperplasia	11 [2.2]	16 [1.4]	8 [1.4]	11 [2.0]
Follicle, Cyst		4 [3.0]	1 [2.0]	3 [3.0]
Follicular Cell, Hyperplasia	1 [2.0]		1 [2.0]	1 [1.0]
GENERAL BODY SYSTEM				
Peritoneum	(1)	(0)	(0)	(0)
GENITAL SYSTEM				
Coagulating Gland	(1)	(0)	(0)	(4)
Inflammation				1 [4.0]
Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	4 [3.3]			2 [2.5]
Preputial Gland	(50)	(50)	(50)	(50)
Hyperplasia	4 [2.3]	2 [3.0]	1 [4.0]	1 [3.0]
Inflammation, Chronic Active	43 [2.1]	46 [1.7]	44 [1.8]	46 [1.9]
Mineralization				1 [2.0]
Bilateral, Hyperplasia		1 [3.0]		
Duct, Ectasia	3 [3.7]	2 [4.0]	2 [3.0]	2 [2.0]
Prostate	(50)	(50)	(50)	(50)
Cyst, Multiple			1 [3.0]	
Inflammation, Chronic Active	22 [1.7]	27 [1.8]	36 [1.7]	30 [1.8]
Epithelium, Hyperplasia	10 [1.6]	13 [1.3]	14 [1.6]	17 [1.4]
Epithelium, Hypertrophy	14 [1.6]	14 [1.8]	21 [1.7]	17 [1.4]
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Mineralization	32 [1.3]	34 [1.0]	30 [1.1]	24 [1.2]
Germinal Epithelium, Degeneration	5 [3.0]	7 [3.6]	8 [2.5]	5 [3.6]
Interstitial Cell, Hyperplasia	10 [1.4]	11 [1.0]	10 [1.4]	5 [1.2]
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Fibrosis				1 [2.0]
Hyperplasia	19 [3.9]	20 [3.9]	27 [3.7]	16 [3.6]
Lymph Node	(10)	(6)	(4)	(4)

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Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Deep Cervical, Pigmentation	1 [2.0]			
Pancreatic, Hemorrhage		1 [4.0]		
Lymph Node, Mesenteric	(50)	(50)	(50)	(49)
Necrosis, Lymphoid		1 [4.0]		
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	5 [2.4]			2 [3.0]
Necrosis	1 [3.0]			
Capsule, Fibrosis			1 [3.0]	
Lymphoid Follicle, Atrophy			1 [4.0]	
Lymphoid Follicle, Hyperplasia			1 [4.0]	
Thymus	(48)	(47)	(49)	(46)
Ectopic Parathyroid Gland			1 [2.0]	1 [2.0]
Thymocyte, Necrosis		1 [3.0]		
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(49)	(50)	(50)
Cyst				2 [2.0]
Galactocoele			1 [4.0]	
Duct, Dilatation	7 [2.4]	15 [2.1]	8 [1.9]	4 [2.0]
Skin	(50)	(49)	(50)	(50)
Cyst Epithelial Inclusion				1 [4.0]
Inflammation, Chronic Active			1 [2.0]	
Epidermis, Hyperplasia			1 [4.0]	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Hyperostosis		1 [4.0]		
Skeletal Muscle	(3)	(1)	(2)	(2)
Lymphatic, Angiectasis				1 [4.0]
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	1 [4.0]	2 [3.5]		
Hemorrhage	4 [2.8]	2 [2.5]	1 [2.0]	
Hydrocephalus		1 [3.0]		2 [2.5]

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FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Cerebellum, Necrosis		1 [4.0]		
Spinal Cord	(1)	(1)	(1)	(0)
Hemorrhage		1 [3.0]		
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Congestion				1 [2.0]
Fibrosis	1 [2.0]			
Hemorrhage				1 [3.0]
Inflammation, Suppurative				1 [4.0]
Inflammation, Chronic Active	22 [1.5]	19 [1.3]	24 [1.3]	30 [1.3]
Metaplasia, Osseous	1 [2.0]	2 [1.0]	1 [1.0]	1 [2.0]
Metaplasia, Squamous		1 [3.0]		
Pigmentation				1 [2.0]
Alveolar Epithelium, Hyperplasia	9 [2.0]	15 [2.3]	13 [2.4]	9 [2.0]
Alveolar Epithelium, Metaplasia, Squamous	1 [2.0]			
Alveolus, Infiltration Cellular, Histocyte	28 [1.0]	30 [1.0]	34 [1.1]	36 [1.1]
Bronchus, Foreign Body				1
Bronchus, Hyperplasia				1 [4.0]
Perivascular, Infiltration Cellular, Lymphoid	29 [1.3]	28 [1.0]	28 [1.1]	32 [1.2]
Nose	(50)	(49)	(48)	(49)
Foreign Body	10	14	7	9
Inflammation, Suppurative	3 [1.7]	7 [1.7]	5 [2.2]	9 [1.7]
Inflammation, Chronic Active	6 [1.3]	9 [1.8]	2 [1.5]	5 [1.6]
Thrombosis	2 [4.0]	4 [3.5]	6 [4.0]	1 [4.0]
Glands, Dilatation	1 [2.0]	1 [2.0]		
Nasolacrimal Duct, Cyst			1	
Nasolacrimal Duct, Inflammation, Suppurative	2 [2.0]	1 [2.0]		
Nasolacrimal Duct, Inflammation, Chronic	3 [2.0]	4 [2.3]	3 [2.0]	1 [2.0]
Olfactory Epithelium, Accumulation, Hyaline Droplet	6 [1.3]			
Olfactory Epithelium, Cyst		1		
Olfactory Epithelium, Degeneration	18 [1.1]	22 [1.1]	26 [1.2]	29 [1.5]
Olfactory Epithelium, Metaplasia, Respiratory	2 [2.0]	5 [1.4]	3 [1.3]	11 [1.4]

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Olfactory Epithelium, Metaplasia, Squamous				1 [2.0]
Olfactory Epithelium, Necrosis	1 [3.0]			
Respiratory Epithelium, Accumulation, Hyaline Droplet	7 [1.6]			
Respiratory Epithelium, Hyperplasia	28 [1.9]	24 [1.7]	18 [1.6]	23 [1.9]
Respiratory Epithelium, Metaplasia, Squamous		2 [1.5]	1 [1.0]	16 [2.0]
Respiratory Epithelium, Necrosis	1 [2.0]			
Trachea	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 [2.0]
SPECIAL SENSES SYSTEM				
Ear	(0)	(0)	(0)	(2)
Eye	(50)	(50)	(50)	(50)
Lens, Cataract	3 [3.3]	1 [4.0]		1 [4.0]
Retina, Degeneration	3 [3.3]	1 [4.0]		1 [4.0]
Harderian Gland	(49)	(50)	(50)	(50)
Hyperplasia				1 [2.0]
Inflammation, Chronic Active	5 [1.2]	6 [1.5]	3 [1.7]	7 [1.1]
Zymbal's Gland	(0)	(0)	(0)	(1)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Hydronephrosis				1 [2.0]
Infarct		1 [4.0]	1 [4.0]	
Inflammation, Suppurative				1 [2.0]
Mineralization	19 [1.0]	30 [1.0]	22 [1.0]	30 [1.0]
Nephropathy	50 [1.9]	49 [1.9]	45 [2.0]	47 [1.7]
Thrombosis			1 [4.0]	1 [3.0]
Bilateral, Infarct		1 [4.0]		
Cortex, Cyst	1 [2.0]	1 [4.0]		
Renal Tubule, Accumulation, Hyaline Droplet		1 [4.0]	1 [3.0]	1 [4.0]
Renal Tubule, Hyperplasia			2 [1.0]	
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				1 [3.0]

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WITH AVERAGE SEVERITY GRADES[b]
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FISCHER 344 RATS MALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG

*** END OF MALE ***

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FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Dosing Accident				2
Moribund Sacrifice	14	7	13	7
Natural Death	5	11	10	11
Survivors				
Natural Death				1
Terminal Sacrifice	31	32	27	29
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Intestine Large, Cecum	(50)	(50)	(50)	(49)
Intestine Large, Colon	(50)	(50)	(50)	(49)
Parasite Metazoan	1		1	4
Intestine Large, Rectum	(50)	(49)	(50)	(50)
Diverticulum		1 [4.0]		
Parasite Metazoan	3	6	3	3
Intestine Small, Ileum	(50)	(50)	(50)	(49)
Parasite Metazoan			1	
Intestine Small, Jejunum	(50)	(50)	(50)	(49)
Peyer's Patch, Hyperplasia, Lymphoid		1 [3.0]		
Liver	(50)	(50)	(50)	(49)
Angiectasis		1 [2.0]	1 [3.0]	2 [1.0]
Basophilic Focus	44	47	45	42
Clear Cell Focus		2	2	1
Eosinophilic Focus			1 [2.0]	1
Hematopoietic Cell Proliferation	7 [1.0]	10 [1.0]	8 [1.0]	4 [1.0]
Hemorrhage			1 [4.0]	
Hepatodiaphragmatic Nodule	6	8	8	7
Inflammation, Chronic Active	43 [1.1]	40 [1.2]	41 [1.1]	39 [1.2]
Mineralization			1 [1.0]	
Mixed Cell Focus	9	13	8	8
Bile Duct, Hyperplasia	23 [1.1]	22 [1.1]	29 [1.1]	24 [1.2]
Centrilobular, Hepatocyte, Degeneration	2 [3.0]			2 [3.5]
Hepatocyte, Degeneration, Cystic			1 [1.0]	1 [1.0]

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FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Hepatocyte, Fatty Change	6 [2.5]	5 [1.4]		2 [2.0]
Hepatocyte, Hyperplasia		1 [3.0]		
Hepatocyte, Necrosis				2 [2.0]
Hepatocyte, Vacuolization Cytoplasmic	9 [1.0]	5 [1.8]	2 [2.0]	2 [1.5]
Mesentery	(7)	(10)	(9)	(9)
Fat, Fibrosis	5 [2.8]	8 [2.8]	7 [2.6]	8 [2.9]
Fat, Inflammation, Chronic Active	5 [3.0]	7 [3.0]	7 [2.6]	5 [2.6]
Fat, Mineralization	4 [1.8]	6 [1.5]	3 [1.7]	5 [1.4]
Fat, Necrosis	7 [4.0]	9 [4.0]	7 [4.0]	9 [4.0]
Fat, Pigmentation				3 [1.7]
Lymphatic, Angiectasis			1 [4.0]	
Pancreas	(50)	(50)	(50)	(49)
Infiltration Cellular, Lymphoid		1 [4.0]		
Inflammation, Chronic Active		2 [1.5]	1 [1.0]	
Acinus, Atrophy	10 [1.7]	11 [1.6]	5 [1.0]	10 [1.5]
Acinus, Hyperplasia			1 [2.0]	
Duct, Cyst		1 [2.0]		3 [2.0]
Salivary Glands	(50)	(49)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(49)
Inflammation, Chronic Active	1 [3.0]	2 [2.5]		3 [2.7]
Epithelium, Hyperplasia	2 [2.5]			3 [2.0]
Epithelium, Ulcer	1 [4.0]	2 [3.0]		2 [4.0]
Stomach, Glandular	(50)	(50)	(50)	(49)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	47 [1.8]	49 [2.0]	46 [1.8]	47 [1.8]
Mineralization	1 [3.0]			
Atrium, Thrombosis	2 [4.0]			1 [4.0]
Valve, Inflammation, Suppurative			1 [3.0]	
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule			1 [2.0]	2 [2.0]
Hematopoietic Cell Proliferation	7 [1.0]	14 [1.0]	9 [1.0]	7 [1.0]
Hyperplasia	12 [1.5]	14 [2.2]	13 [1.7]	4 [2.0]
Hypertrophy	5 [1.6]	5 [1.8]	1 [3.0]	3 [2.0]

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Karyomegaly				1 [2.0]
Necrosis	1 [3.0]	1 [2.0]		
Pigmentation			1 [2.0]	
Vacuolization Cytoplasmic	22 [1.7]	25 [1.7]	16 [1.5]	20 [1.4]
Bilateral, Hemorrhage		1 [3.0]		
Adrenal Medulla	(50)	(50)	(50)	(49)
Hyperplasia	4 [2.3]	3 [2.0]	2 [1.0]	4 [2.3]
Infiltration Cellular, Lymphoid				2 [2.0]
Islets, Pancreatic	(50)	(50)	(50)	(49)
Pituitary Gland	(50)	(50)	(50)	(50)
Hemorrhage		1 [4.0]		
Pars Distalis, Pars Intermedia, Pigmentation			1 [2.0]	1 [1.0]
Pars Distalis, Angiectasis	34 [2.8]	34 [2.9]	29 [2.7]	34 [2.8]
Pars Distalis, Cyst	7 [1.9]	9 [2.3]	11 [1.9]	7 [2.1]
Pars Distalis, Cyst, Multiple	10 [2.2]	12 [2.5]	14 [2.1]	9 [2.2]
Pars Distalis, Hyperplasia	20 [2.6]	13 [2.4]	20 [2.4]	20 [2.7]
Pars Distalis, Pigmentation	27 [1.6]	27 [1.4]	27 [1.3]	30 [1.3]
Pars Distalis, Vacuolization Cytoplasmic	1 [2.0]			
Pars Intermedia, Angiectasis				1 [2.0]
Pars Intermedia, Cyst	1 [3.0]			4 [2.0]
Pars Intermedia, Cyst, Multiple	1 [3.0]			1 [3.0]
Pars Intermedia, Pigmentation	2 [1.0]	1 [2.0]	2 [1.5]	
Rathke's Cleft, Cyst			1 [3.0]	
Thyroid Gland	(50)	(50)	(50)	(50)
Ultimobranchial Cyst		1 [2.0]		1 [2.0]
C-cell, Hyperplasia	14 [1.8]	13 [1.5]	13 [1.3]	13 [1.4]
Follicle, Cyst	1 [2.0]			1 [3.0]
Follicular Cell, Hyperplasia				1 [2.0]
GENERAL BODY SYSTEM				
Peritoneum	(0)	(1)	(0)	(0)
Tissue NOS	(0)	(0)	(0)	(1)
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(50)
Hyperplasia	10 [3.1]	13 [2.5]	7 [2.6]	8 [2.5]

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Inflammation, Chronic Active	12 [2.0]	26 [1.7]	18 [1.7]	10 [1.3]
Bilateral, Hyperplasia		1 [3.0]	3 [2.3]	1 [4.0]
Duct, Cyst	1 [2.0]	1 [2.0]	1 [2.0]	2 [2.5]
Ovary	(49)	(50)	(50)	(49)
Atrophy		1 [4.0]		
Cyst	11 [3.4]	9 [3.3]	6 [3.3]	5 [2.8]
Bilateral, Cyst		1 [4.0]		
Uterus	(50)	(50)	(50)	(49)
Hemorrhage	1 [4.0]		1 [4.0]	
Endometrium, Cyst		2 [2.5]	2 [2.0]	1 [4.0]
Vagina	(0)	(0)	(3)	(0)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	9 [3.8]	9 [3.6]	9 [3.7]	8 [3.5]
Hyperplasia, Histiocytic			1 [4.0]	
Lymph Node	(1)	(1)	(1)	(4)
Lymph Node, Mesenteric	(50)	(49)	(50)	(49)
Hyperplasia, Lymphoid	1 [3.0]			
Spleen	(50)	(50)	(50)	(49)
Accessory Spleen				1
Hematopoietic Cell Proliferation	2 [3.5]	3 [2.3]	6 [2.2]	2 [3.0]
Lymphoid Follicle, Hyperplasia		1 [4.0]		
Thymus	(48)	(47)	(48)	(43)
Ectopic Parathyroid Gland	2 [2.0]	6 [2.0]	2 [1.5]	1 [2.0]
Ectopic Thyroid			1 [2.0]	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(49)
Cyst				1 [4.0]
Galactocele	17 [3.9]	17 [3.8]	21 [3.8]	17 [3.8]
Hyperplasia, Cystic		1 [2.0]	1 [3.0]	
Duct, Dilatation	37 [2.6]	40 [2.4]	35 [2.3]	38 [2.2]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 [4.0]			1 [4.0]
Subcutaneous Tissue, Inflammation, Chronic Active				1 [3.0]

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Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteopetrosis	1 [3.0]			
Skeletal Muscle	(1)	(0)	(0)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	2 [3.0]	1 [4.0]	2 [3.5]	4 [3.3]
Hemorrhage	1 [3.0]			
Hydrocephalus	2 [2.0]	3 [2.3]	1 [3.0]	1 [3.0]
Inflammation, Chronic Active	1 [3.0]			
Necrosis	1 [4.0]			
Spinal Cord	(0)	(0)	(1)	(0)
Hemorrhage			1 [2.0]	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Cyst				1 [3.0]
Fibrosis				3 [2.3]
Hemorrhage				1 [3.0]
Inflammation, Suppurative		1 [1.0]		
Inflammation, Chronic Active	31 [1.3]	30 [1.4]	28 [1.5]	37 [1.7]
Metaplasia, Osseous	2 [1.0]	1 [1.0]	1 [1.0]	
Pigmentation	3 [2.0]	3 [1.7]	5 [1.2]	2 [1.5]
Alveolar Epithelium, Hyperplasia	11 [2.4]	10 [1.6]	10 [2.3]	8 [2.4]
Alveolus, Infiltration Cellular, Histocyte	45 [1.0]	46 [1.0]	46 [1.0]	37 [1.1]
Bronchus, Hyperplasia				3 [3.7]
Bronchus, Metaplasia, Squamous				3 [2.7]
Perivascular, Infiltration Cellular, Lymphoid	40 [1.1]	45 [1.2]	43 [1.3]	42 [1.2]
Nose	(50)	(49)	(49)	(49)
Foreign Body	3	2	1	8
Inflammation, Suppurative				8 [1.5]
Inflammation, Chronic Active	4 [1.8]	3 [1.3]	2 [1.0]	7 [1.4]

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Thrombosis				1 [1.0]
Glands, Dilatation		1 [2.0]	1 [2.0]	
Nasolacrimal Duct, Inflammation, Suppurative	1 [2.0]	1 [2.0]	1 [2.0]	2 [2.0]
Nasolacrimal Duct, Inflammation, Chronic	2 [2.0]	2 [2.0]	3 [1.7]	12 [2.0]
Olfactory Epithelium, Accumulation, Hyaline Droplet	34 [1.9]	15 [1.3]	22 [1.5]	
Olfactory Epithelium, Degeneration	21 [1.2]	35 [1.2]	36 [1.2]	28 [1.3]
Olfactory Epithelium, Metaplasia, Respiratory	1 [1.0]	1 [2.0]		11 [1.8]
Olfactory Epithelium, Metaplasia, Squamous				2 [1.0]
Olfactory Epithelium, Necrosis			1 [2.0]	
Respiratory Epithelium, Accumulation, Hyaline Droplet	9 [1.8]	3 [1.3]	4 [1.3]	
Respiratory Epithelium, Hyperplasia	18 [1.9]	13 [1.8]	21 [2.0]	20 [2.1]
Respiratory Epithelium, Metaplasia, Squamous	1 [2.0]	1 [2.0]		24 [2.1]
Respiratory Epithelium, Necrosis		1 [2.0]		2 [2.0]

SPECIAL SENSES SYSTEM

Ear	(1)	(1)	(0)	(1)
Eye	(50)	(50)	(50)	(50)
Atrophy		1 [4.0]		
Lens, Cataract	2 [3.5]	1 [4.0]	1 [4.0]	1 [4.0]
Retina, Degeneration	2 [3.0]	1 [4.0]	1 [3.0]	1 [4.0]
Harderian Gland	(50)	(50)	(49)	(50)
Hyperplasia		1 [2.0]		
Inflammation, Chronic Active	12 [1.3]	12 [1.4]	18 [1.2]	15 [1.4]
Zymbal's Gland	(0)	(0)	(1)	(0)

URINARY SYSTEM

Kidney	(50)	(50)	(50)	(49)
Hydronephrosis	1 [4.0]	1 [3.0]		
Infarct	1 [3.0]		1 [4.0]	
Inflammation, Suppurative			1 [1.0]	
Inflammation, Chronic Active		1 [4.0]		1 [3.0]

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TDMS No. 95011 - 07

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]**

Date Report Requested: 09/01/2006

Test Type: CHRONIC

5-(HYDROXYMETHYL)-2-FURFURAL

Time Report Requested: 08:20:21

Route: GAVAGE

CAS Number: 67-47-0

First Dose M/F: 03/06/02 / 03/07/02

Species/Strain: RATS/F 344

Pathologist: TOFT, J. - Unknown, U.

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	188 MG/KG	375 MG/KG	750 MG/KG
Mineralization	28 [1.0]	17 [1.1]	19 [1.1]	25 [1.0]
Nephropathy	43 [1.3]	42 [1.2]	39 [1.1]	35 [1.2]
Cortex, Pelvis, Cyst, Multiple	1 [3.0]			
Cortex, Cyst	2 [3.0]	1 [2.0]		1 [1.0]
Pelvis, Transitional Epithelium, Hyperplasia	1 [3.0]			
Pelvis, Inflammation, Chronic Active	1 [3.0]			
Urinary Bladder	(50)	(50)	(50)	(50)

*** END OF REPORT ***

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